

**REMARKS:**

In the outstanding Office Action, the Examiner allowed claims 6-11 and rejected claims 1, 3-5 and 12-24. Claims 1 and 12-18 are amended herein. Claim 2 remains cancelled. No new matter is presented. Thus, claims 1 and 3-24 are pending and under consideration. The rejections are traversed below.

**REJECTION UNDER 35 U.S.C. § 103(a):**

Claims 1, 3, 5 and 12-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Publication No. 2002/0015200 (Jennings), U.S. Patent No. 5,995,254 (Koga), U.S. Patent No. 6,288,809 (Touma) and/or U.S. Patent No. 5,500,756 (Tsushima).

Jennings discusses that the monitoring shelf unit (122) detects signal degradation and characterized only whether the degradation has occurred in the optical links or in the customer equipment. In Jennings, based on the received  $\lambda_1$  signals, the monitoring shelf unit (122) characterizes system optical links (106 and 108) as marginally functional, or characterizes the detected signal degradation as the result of improperly functioning customer equipment (see, paragraphs 18, 19 and Fig. 2). As such, Jennings is limited to recording the time of occurrence of the degradation and magnitude of the degradation condition in the optical links and routing the optical signal of  $\lambda_3$  from the customer equipment to a receiver.

The Examiner acknowledges that Jennings does not disclose a specific wavelength for an up data signal where the first and second coupling units and the first and second dividing units are formed of passive elements, but relies on Koga as teaching the same. However, Koga is directed to maintaining multiplexed signal lights having wavelengths of  $\lambda_1$  and  $\lambda_2$  until receipt of the same via receiving sections (see, FIG. 2 and corresponding text). The system of Koga is limited to combining light signals with different wavelengths for improving the signal noise ratio of a monitor signal.

Touma discusses a passive optical subscriber network system that has an optical star coupler SC which consists of passive elements between a station unit and the optical network units (subscriber units) (see, col. 2, lines 23-30). However, the optical wavelength selecting coupler (OWSC) of the optical service unit (OSU) or the optical network unit (ONU) in Touma performs the demultiplexing and the multiplexing process.

On the other hand, the power monitor (9) in Tsushima detects the power of the data optical signal passing through the optical filter. However, Tsushima simply outputs an alarm

signal when value of the observed values of Pd and the normal value are different (see, Fig. 10 and col. 2, line 62 through col. 3, line 8).

Independent claim 1, by way of example, recites coupling "a down data signal of a first wavelength and an examination signal of a second wavelength to transmit a first coupled signal to a lower apparatus" and demultiplexing "said first coupled signal from said optical coupling unit so as to divide and split said first coupled signal... said examination signal being returned." Claim 1 further recites coupling "an up data signal with the first wavelength and said returned examination signal... to transmit a second coupled signal toward a host apparatus." The claimed system monitors "a fault and an exact location of said fault by using said examination signal with the second wavelength and indicates said exact location of whether said fault occurs in the transmission line, the lower apparatus or the host apparatus."

Similarly, independent claims 12-17 recite monitoring "an exact location" of the fault including indicating the exact location of whether the fault occurs in "the transmission line or apparatus."

Independent claim 18 recites, "inserting the returned portion of the down data signal into an up data signal with a first wavelength, and coupling the returned examination signal of the second wavelength with the up data signal to transmit a second coupled signal towards a host apparatus." Claim 18 further recites that "a fault is monitored and information indicative of an exact location of whether the fault occurred in the transmission line, the terminal, or the host apparatus is provided."

The cited references do not teach or suggest the above features including monitoring "an exact location of said fault" and indicating "said exact location of whether the fault occurred in the transmission line, the transmission line, the lower apparatus or the host apparatus" ("apparatus" in claims 16 and 17 and "terminal" in claim 18).

It is submitted that the independent claims are patentable over the cited references.

For at least the above-mentioned reasons, claims depending from the independent claims are patentably distinguishable over the cited references. The dependent claims are also independently patentable. For example, as recited in claim 5, "an examination signal generator which divides an input down data signal into two signals, one signal being converted into said down data signal with the first wavelength, the other signal being converted into said examination signal with the second wavelength." The cited references, alone or in combination, do not teach or suggest these features of claim 5.

Starting on page 6 of the outstanding Office Action, the Examiner states that it would have been obvious to a person of ordinary skill in the art to replace the demultiplexer, multiplexer of Jennings with the passive multiplexer/demultiplexer taught by Touma. Further, the Examiner states that Official Notice that passive multiplexer/demultiplexer is well recognized in the art. Applicants respectfully traverse the Examiner's statement and request the Examiner to produce authority for the statement.

In particular, Applicants point out that the noticed fact is not considered to be common knowledge or well-known in the art. In this case, the limitation is not of notorious character or capable of instant and unquestionable demonstration as being well-known. (see, M.P.E.P. § 2144.03(A) (the notice of facts beyond the record which may be taken by the Examiner must be "capable of such instant and unquestionable demonstration as to defy dispute").

Therefore, withdrawal of the rejection is respectfully requested.

**ALLOWED CLAIMS:**

The Examiner indicated that claims 6-11 are allowed.

**ENTRY OF AMENDMENT:**

Applicants respectfully request entry of amendments to the claims because the amendments were made to clarify features of the claims and do not introduce significant changes that would require a further search.

**CONCLUSION:**

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited. Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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